instances the characters possessed by the artificial varieties, are absolutely impossible in the plan on which the genus, or even the order, is created.

Instances of such permanent varieties may be readily recalled by every one; some of the most familiar are: the hornless variety of domestic cattle; the tailless variety of domestic cat, found in the Isle of Man; the long-haired cat, known as the Angora, or Persian cat; the various forms of fowls with additional toes, and without tails; the varieties of pigeons and fowls with uncouth and distorted arrangement of plumage.

The origin of some of these is lost in the depths of the past, while others are continually being introduced.

In all the examples cited above, it will be found that the monstrosity depends on the loss of a character belonging to every species of the genus or tribe to which the parent stock belongs, or on the assumption of a character not found in any species or genus of that group.

In the case of the hornless cattle, the part wanting, if not entirely coextensive with the order of ruminants, is at least essential to the genus Bos.

In the anomalously feathered varieties of fowls and pigeons, the animal assumes structures either unknown in the groups to which it belongs, or else (as in the case of the 'ruffler') entirely impossible in any species of bird whatever.

The novelty in this principle is, that in the disputed cases of plural origin, the slightness of the unchangeable differences, found in different races, becomes a very strong, and, indeed, an invincible argument against the supposition that they have been derived from each other by the operation of external or internal causes.

The advocates of the single origin of man or of dogs, are therefore in the unpleasant predicament of having proved too much, since the difference between the latter, on comparison with undeniable distinct wild species of wolf and fox, are in those characters which alone can manifest specific distinction.

In the case of man the differences are in such particulars as alone could be changed without degrading him from his place at the head of the organic world.

It is almost needless for me to add that this principle extends to the vegetable kingdom, as every one will at once see in greenhouse and domestic plants, that the cultivated varieties are distinguished from each other by important structural differences, not recognized in the genera to which they belong.

In all species or races there are individual differences of less importance than specific characters, which by care may be isolated, and form what are apparently races. Thus snub noses almost invariably reproduce snubs; aquiline noses, in the same way, continue in families for numbers of generations. Yet, not to speak of the unimportance of such marks, these cases may be distinguished by the frequency with which exceptions occur. The numerous varieties of cultivated fruits come under this head.

February 24th.

Vice President BRIDGES in the Chair.

The Committee to which was referred the following papers by Dr. Le Conte, reported in favor of publication in the Proceedings:

Hints towards a Natural Classification of the Family HISTRINI *of Coleopterous Insects.*

BY JOHN L. LE CONTE, M.D.

It is rarely that any subject treated by the illustrious Erichson is found capable of improvement. It is therefore with reluctance and hesitation that after a minute study of the North American species of Hister, I find myself under the

necessity of proposing important modifications of the arrangement adopted by him.*

The great increase in the number of our species, since the publication of the monograph of Histers by my father,† has made me acquainted with many variations of structure, too unimportant to serve as foundations for separate genera, yet absolutely incapable of entering any of the genera established by Erichson. Some of these anomalous species have been described by me in the Annals of the Lyceum of Natural History, vol. 5.

By a careful comparison of such forms with the species to which, by obvious characters, they are most nearly allied, I have been led to believe that the genera in this group have been unnecessarily increased, by the use of principles of division which are by no means of generic value, and which scarcely serve to define small groups of species.

I allude more especially to the structure of the tibiæ, which holds so important a place in the system of Erichson. The difficulty of deciding upon such an indistinct character as the form of the tarsal groove of the anterior tibiæ, and the decidedly variant structure of the posterior tibiæ in several of the genera, has led me to reject entirely the characters drawn from those parts of the body. The special variations referred to will be exposed more fully under the genera Hister and Saprinus below.

Following Erichson, I have divided the genera into three groups according to the position of the head and the form of the prosternum. The genera may afterwards be separated according to the following table:

A. Caput porrectum: prosternum antice non lobatum.

Mandibulæ dentatæ . . . . . Hololepta Payk.
Mandibulæ dentatæ, prosternum latum planum . . [1]Phylloma Er.
Mandibulæ dentatæ, prosternum elevatum, subacuminatum . . . . . [1]Oxysternus Er.

B. Caput retractum; prosternum antice valde lobatum.

a. Scrobiculi antennales antici.

1. Tarsi antici unguiculo unico . . . . . [1]Cypturus Er.
2. Tarsi omnes biunguiculati.
Mandibulæ porrectæ, antennæ sub frontis margine insertæ, capitulo 3-articulato . . . . . [2]Hister Linn.
Mandibulæ porrectæ, antennæ sub frontis margine insertæ, capitulo solido, truncato . . . . . [3]Hetærius Er.
Mandibulæ retractæ, antennæ in frontis margine insertæ, capitulo 3-articulato, rotundato, ... Epierus Er.
Mandibulæ retractæ, antennæ in frontis margine insertæ, capitulo 3-articulato, truncato . . . . Tribalus Er.

b. Scrobiculi antennales medii, laterales.

Antennæ articulo 8vo latiore . . . . . Dendrophilus Leach.
Antennæ articulo 8vo non latiore . . . . Paromalus Er.

C. Caput retractum, prosternum antice non lobatum.

a. Antennæ sub frontis margine insertæ.

Mandibulæ exsertæ; scrobiculi antennales antici . Cærosternus n. g.
Mandibulæ exsertæ; scrobiculi antennales ad prosterni latera siti . . . . . [4]Saprinus Leach.
Mandibulæ clypeo obtectæ . . . . . [1]Tryponæus Er.

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* Klug's Jahrbücher für Insectenkunde.

† Boston Journal of Natural History, vol. V. p. 32.

1 No North American species.

2 Including Omalodes Er.; Platysoma Leach. Er: (?) Plæsius Er. and (?) Placodes Er. I have not examined the last two genera, but the description furnishes no good characters for separating them.

3 Hister brunnipennis Rand., and a new species. 4 Including Pachylopus Er.

b. Antennæ in frontem insertæ.

Scrobiculi antennales medii, laterales, prosterno subproducto . . . . . TERETRIUS Er.
Scrobiculi antennales ad prosterni latera siti . . . PLEGADERUS Er.
Scrobiculi antennales antici . . . . . ONTHOPHILUS Leach.
Scrobiculi antennales medii, laterales, prosterno truncato ABRÆUS Leach.

HISTER Linné.

I have included in this genus Omalodes and Platysoma; as they are founded on slight differences in the form of the tibiæ. Plæsius and Placodes will also probably enter here; at least I cannot find anything to separate them, except differences in the spines of the posterior tibiæ.

The posterior tibiæ of this genus, are generally broad, and externally armed with two series of spines: sometimes a range of bristles on the posterior face of the tibiæ is enlarged so as to simulate a third row of spines; sometimes (Hister arcuatus Say) the whole outer surface of the tibiæ is rough with confused spines; in H. costatus (n. sp.) the posterior tibiæ are narrow, and the spines are very fine: these tibiæ are usually not toothed on the outer margin, yet in H. sexstriatus Lec. they are distinctly four-toothed: they are also toothed in the species referred to Omalodes and Platysoma, the number of teeth in the latter being variable, and the teeth themselves frequently indistinct: they are entirely smooth in some small species allied to H. subrotundus, and belonging to Erichson's 3d division; the posterior feet are smooth, and the intermediate ones armed with a single tooth near the apex in H. corticalis Lec.; finally, the posterior tibiæ are broad, very much compressed and finely serrate in Omalodes Harrisii Lec.

The anterior tibiæ are broad, compressed and more or less distinctly toothed on the outer margin, usually with a single row of very short articulated spines; on the anterior face is a groove for the reception of the tarsus; the inner margin of this groove is sharply defined; the outer margin indistinct, in most species; more distinct in the species referred to Omalodes; some of the species of Platysoma have the outer margin distinct, while in others (H. Carolinus Payk.) it is quite indistinct. The species, with the exception of the large tropical species, which would probably form a separate division, can be arranged according to the following table; the internal marginal stria of the thorax, when it exists, is entire, and extends around the whole apex of the thorax; the outer stria always ends at the anterior angle.

A. Thorax stria marginali interiore integerrima, antice ambiente.

* Thorax stria marginali margini valde approximata.

Thorax stria marginali unica; (tibiæ posteriores dentatæ.) *Omalodes* Er. 1.
Thorax striis marginalibus duabus; (tibiæ post valde compressæ serrulatæ.) 2.

** Thorax stria marginali interiore a margine remota.

a. Thorax margine ciliato; (scrobiculi antennales non profundi.)
Tibiæ posteriores dilatatæ . . . . . 3.
Tibiæ posteriores tenues. . . . . 4.

b. Thorax margine glabro; (scrobiculi antennales profundi.)
a. Tibiæ posteriores subdentatæ . . . . . 5.
b. Tibiæ posteriores biseriatim spinulosæ.
† Mesosternum emarginatum.
α. Epipleuræ excavatæ unistriatæ: (tibiæ anticæ multidentatæ) . 6.
β. Epipleuræ non excavatæ, pluristriatæ.
Tibiæ anticæ parce dentatæ, epipleuræ bistriatæ . . . . 7.
Tibiæ anticæ parce dentatæ, epipleuræ tristriatæ . . . . 8.
Tibiæ anticæ serrulatæ vel muticæ, epipleuræ bistriatæ . . . 9.
†† Mesosternum truncatum.
Epipleuræ bistriatæ . . . . . 10.
Epipleuræ angustissimæ, unistriatæ . . . . . 11.

B. Thorax stria marginali interiore nulla.

† Mesosternum truncatum; prosternum bistriatum.

Prosternum striis parallelis: (thorax stria exteriore nulla, corpus depressum) 12.
Prosternum striis convergentibus: (thorax stria exteriore distincta vel nulla, corpus convexum) . . . . . 13.

†† Mesosternum emarginatum: prosternum estriatum. (*Platysoma* Leach.)
Prosternum postice planum, (corpus depressum) . . . . . 14.
Prosternum postice compressum et marginatum, (corpus cylindricum) . 15.

The species found in the United States may be distributed as follows:

1, corresponds to Omalodes Er.: the only United States is H. borealis (*Omalodes borealis* Lec.)

2, contains only H. planipes (*Omalodes Harrisii* Lec.) The name Harrisii being preoccupied for a species of group 6, must of course be changed.

3, contains H. arcuatus Say; binotatus Lec; lævipes Er. and a new species allied to arcuatus.

*5, is composed of a Californian species, H. 6-striatus Lec. (An. Lyc. 5.)

6, contains H. interruptus Beauv. (*obtusatus* Harris); merdarius Payk; immunis Er; Harrisii Kirby; diversus Er. (*stygicus* Lec.); fœdatus Lec.; cognatus Lec.; marginicollis Lec., and one new species.

7, contains H. dispar Lec.; indistinctus Say; depurator Say; and one new species.

8, H. spretus Lec.; curtatus Lec.; and two new species.

9, H. civilis Lec.; cœnosus Er. (*decisus* Lec.); punctifer Payk; abbreviatus Fabr.; bifidus Say, and perhaps H. repletus Lec. which I have not examined; it is doubtful whether H. punctifer is really a native of our territory; the only one found may have been introduced.

10, H. sedecimstriatus Say; americanus Payk.; exaratus Lec.; and two new species.

11, contains only H. bimaculatus Linn. (*obliquus* Say).

12, H. venustus Lec. and corticalis Lec. Small flat species having the appearance of Platysoma; the posterior tibiæ are almost glabrous; H. venustus has the lobe of the prosternum shorter than any other species I have seen.

13, H. subrotundus Er. and H. vernus Say; small convex species, one of which has an entire marginal stria on the thorax, the other none. A new species from Mexico has an abbreviated stria at the margin of the thorax.

14, contains the small flat species forming the genus Platysoma Leach as amended by Erichson, the posterior tibiæ are more or less distinctly toothed. Our species are: H. carolinus Payk.; depressus Payk.; parallelus Say; coarctatus (*Platy. coarctatum* Lec.); and a new species.

15, Cylindrical species allied to the preceding; H. cylindricus Payk.; attenuatus (*Platy. attenuatum* Lec.); gracilis (*Platys. gracile* Lec., *P. cylindricum*‡ Er., *Hister frontalis*‖ Say.)

Cærosternus.

Caput deflexum, mandibulis retractis sed non obtectis, acutis.
Antennæ sub frontis margine insertæ, funiculo filiformi, capitulo triarticulato, ovali, compresso, apice subtruncato.
Prosternum latum quadratum, utrinque truncatum; scrobiculi antennales angusti profundi ad angulum thoracis inferne siti. Tibiæ anticæ compressæ, subdilatatæ, posteriores tenues glabræ; tarsi posteriores non recepti.

The body is globose, very convex; the abdomen perpendicularly deflexed at the tip: the funiculus of the antennæ is filiform, the first joint longer and a little thicker than the others; the prosternum is very broad, truncate posteriorly, very slightly rounded anteriorly; the cavities for the antennæ are very deep, situated

* Group 4 is founded upon a curious nondescript Mexican species, H. costatus, in which the striæ of the elytra are replaced by elevated ridges.

at the anterior angles, between the upper and under surface of the prothorax, and open laterally. Only two species are known to me, 1. C. americanus (*Tribalus americanus* Lec.) and 2. C. lævissimus, with the upper surface very smooth and shining, the epipleuræ less suddenly inflexed than in C. americanus, with only two very fine lateral striæ; the dorsal striæ of the elytra obsolete: length ·10. It is found in Cuba under the bark of trees, and was sent by Don Felipe Poey. The body is narrower and more elevated than the preceding.

SAPRINUS Leach.

The posterior tibiæ of this genus are usually but little dilated; the external margin is furnished with three series of spines; some of the species of group 9, have four confused series (S. palmatus), others have the spines very dense and occupying a large surface (S. sulcifrons). On account of these variations I am inclined to unite Pachylopus (Er.) with this genus, although the singular sexual character mentioned by Erichson is not found in any Saprinus. At all events, if Erichson's species should remain as a distinct genus, it must be upon very distinct characters from those indicated by him.

The species known to me may be arranged as follows:

A. Caput antice non marginatum; prosternum compressum, elevatum, planum; epipleuræ tristriatæ.

Prosternum striis utrinque divergentibus. . . . . 1.
Prosternum striis antice conjunctis, postice parallelis. . . . . 2.

B. Caput antice non marginatum; epipleuræ bistriatæ.

Prosternum transverse convexum, striis nullis . . . . . 3.
Prosternum transverse convexum, antice utrinque foveatum, striis parallelis, antice abbreviatis . . . . . 4.
Prosternum transverse convexum, non foveatum, striis antice divergentibus 5.
Prosternum transverse convexum, antice utrinque foveatum, striis remotis divergentibus . . . . . 6.
Prosternum compresso-carinatum, striis remotis divergentibus . . . 7.

C. Caput antice marginatum, prosternum striis valde approximatis, postice divergentibus, antice non divergentibus.

Prosternum compressum, striis integris, antice convergentibus . . . 8.
Prosternum compresso-carinatum, striis conniventibus, sæpius indistinctis 9.

The United States species may be distributed as follows:

1, Contains two Californian species: S. alienus Lec.; discoidalis Lec.; the latter approximates somewhat to division C; and in some specimens there is a very faint trace of the double line found on the front of the species belonging to that division.

2, S. deletus Lec.; interceptus Lec.

3, S. interstialis Lec.; a singular oblong species, with the striæ of the elytra nearly parallel.

4, S. obscurus Lec.; pectoralis Lec.; pæminosus Lec.; all from California.

5, S. lugens Er. (*californicus* Man.); Oregonensis Lec.; imperfectus Lec.; impressus Lec.; infaustus (*piceus*‖ Lec.); pensylvanicus Er.; and three new species.

6, S. conformis Lec.; assimilis Er.; minutus Lec.; placidus Er.; insertus Lec.; obductus Lec.; ciliatus Lec.; vinctus Lec.; laridus Lec.; scissus Lec.; and one new species.

7, S. vestitus Lec.; fimbriatus Lec.; plenus Lec.; vitiosus Lec.; lubricus Lec.; cœrulescens Lec.; all from California; and three new species, two of which are from Missouri Territory, and the other from Georgia.

8, S. sphæroides Lec. (*bigener* Lec.); fraternus Lec.; mancus Lec. (*Hister mancus* Say); estriatus Lec.; bigemmeus Lec.; and one new species.

9, Contains species found near the sea shore; they may be arranged in two groups, according to the structure of the posterior tibiæ.

Those with the spines in three series are: S. patruelis Lec.; lucidulus Lec.

Those with the spines more numerous and confused are: S. dimidiatipennis Lec. (var. *Hister palmatus* Say); sulcifrons Man.; serrulatus Lec.; and gaudens Lec.;

these species were referred by me to the genus Pachylopus (vide Ann. Lyc. Nat. Hist. 5.) The epipleuræ of these last are marked with three striæ. The spines on the tibiæ of S. dimidiatipennis are less numeroas than in the others, and form four tolerably distinct series.

Synopsis of the PARNIDÆ *of the United States.*

BY JOHN L. LE CONTE, M. D.

As I have concluded, for reasons detailed below, to introduce the anomalous genus Eurypalpus into this family, I have found it necessary to substitute an entirely new diagnosis for the one given by Erichson. The one proposed by me, in order to include the new genus, is as follows:

Antennæ frontales, non capitatæ; oculi rotundati, mandibulæ retractæ; coxæ anticæ vel subcylindricæ, vel globosæ, acetabulis e prosterno et metathoracis episternis compositis receptæ; pedes ambulatorii, tarsi 5-articulati, cylindrici, unguiculari maximo, unguibus validis armato; trochanteres simplices; abdomen 5—7-articulatum, articulis anterioribus immobilibus.

The character which especially distinguishes this family is the structure of the tarsi, which enables the species to grasp firmly objects resting in strong currents of water. This family may be divided into three groups.

Div. 1, *Eurypalpini.*

Caput exsertum, ore inferno, labro distincto, inter antennas transverse elevatum; coxæ anticæ transversæ, trochantino valde conspicuo; parapleuræ appendiculatæ; abdomen 7-articulatum.

EURYPALPUS‡ Dej.

Antennæ serratæ 11-articulatæ; palpi maxillares valde elongati, articulo ultimo latiore, securiformi, apice subacuto; labiales brevissimi, articulo ultimo minuto subulato.

This very remarkable genus is mentioned by name in Dejean's Catalogue, and is placed by that author towards the beginning of his group Malacodermata, near Cyphon, with which, however, it seems to have but little affinity. Erichson, probably never having seen the insect, referred it upon Dejean's authority, to Cyphones, with a doubt. (Vide Agassiz Nom. Zool.) A close comparison with other groups has convinced me, that although its affinities in any direction are difficult to discover, it must still be considered as forming a part of the present family.

The body is depressed, narrowed in front, obtusely rounded behind. The mandibles are small, acute and entirely concealed by the broad and emarginate labrum; the mentum is trapezoidal; the ligula short, square and slightly emarginate at tip. The prosternum is truncate in front, prolonged behind into an acute point which passes in a narrow groove extending the whole length of the mesosternum. The anterior coxæ are precisely as in Helichus; the posterior coxæ are slightly laminate and dilated interiorly as in Helichus, but are contiguous at their base; the parapleuræ are broadly truncate at the external posterior angle, and the parallelogram is completed by a large triangular plate. The abdomen is 7-jointed, the first three joints are immovable, the 5th deeply emarginate, the 6th retracted so as to have only the edge visible, the last joint almost round; the feet have the last joint much longer than the other four united, with strong simple claws.

The larva resembles in appearance a Trilobite, and has been described by De Kay as a Crustaceous animal under the name *Fluvicola Herricki.* It is entirely aquatic, and breathes by means of branchial filaments, the principal of which proceed from the anus. For a full description of it and the pupa see Agassiz' Lake Superior. It bears a close comparison with the larva of Elmis by Erichson, (Deutschl. Insect. 525).

The perfect insect lives on bushes over the surface of running water, and is also found creeping over the wet stones in torrents; the under surface of the body is sericeous, with fine fulvous hair, perfectly like Helichus.

1. E. Lecontei, subdepressus, ater, subtiliter punctulatus et pubescens, thorace antice fortiter angustato, basi bisinuato, angulis posticis acutis, elytris marginatis, lineis elevatis minus distinctis, pedibus rufis. Long. ·2.

Western New York and Pennsylvania. The great facilities and assistance which my father, Major Le Conte, has constantly extended to me in my scientific labors, will be a sufficient excuse for my continuing the name under which this curious insect is mentioned by Dejean, and by which it is already known to a large number of European entomologists.

Div. 2. *Dryopini* Er.

Coxæ anticæ transversæ, trochantino conspicuo, abdomen 5-articulatum.

LARA.

Caput porrectum, subtus non obtectum; antennæ simplices elongatæ.

Body elongate, narrowed and subacute anteriorly. Head not deflexed; antennæ with the first joint cylindrical, a little longer and thicker than the two following, which are equal; the fourth is a little shorter; the rest are broken off, (probably serrate. The labrum is large and broad, rounded in front, and scarcely emarginate; the mandibles slightly emarginate at tip. Mentum trapezoidal, ligula broad, truncate in front. Prosternum with a short point behind, which fits into the excavated mesosternum; middle coxæ moderately distant; posterior coxæ contiguous at base, very slightly and gradually dilated internally. Legs as in Helichus. The body above and beneath coated with very fine pubescence.

This genus seems to be the desired link connecting the anomalous form Eurypalpus with the true Parnidæ; the abdomen, coxæ and feet are precisely the same as in the latter, while the long simple antennæ are anomalous in this subdivision; the large uncovered labrum is not seen in this subdivision, but is found in Elmis, Macronychus, &c., of the next subdivision, to which, however, it cannot be referred on account of the transverse form of the anterior coxæ. The thorax is much narrowed in front, with the posterior angles acute; scutellum large, acute; elytra almost parallel, rounded at apex. The genus is named after a water nymph.

1. L. avara, olivaceo-picea, thorace confertim grosse punctato, lateribus bisinuatis, disco elevato, canaliculato, margine antico late depresso, elytris nitidis subtiliter striato punctatis, pone basin oblique impressis. Long. ·3.

Sacramento, California, Mr. Rathvon. The thorax has the disc suddenly elevated and canaliculate, so as to present two large bosses, the lateral margin is a little excavated anteriorly and posteriorly; the alternate interstitial spaces of the elytra are more distinctly sericeous; the feet are black, the femora at base ferruginous.

LUTROCHUS Er. (Ins. Deutschl. 509.)

1. L. luteus, ovalis, convexus, æneo-luteus, subtiliter punctulatus, et brevissime dense pubescens; thorace lateribus rectis, basi bisinuata, medio leviter producta, et truncata. Long. ·12. This very remarkable insect was found by Lieut. H. Haldeman, U. S. A., at Fort Gates in Texas; for my specimens I am indebted to his brother S. S. Haldeman. The only other species known is from Brazil.

PELONOMUS Er.

1. P. obscurus, subcylindricus, piceus, pube erecta dense vestitus, thorace confertim punctulato, lateribus rectis obliquis, basi bisinuata, medio late truncata, angulis posticis acutis, elytris dense subtiliter punctatis, obsolete striatis, tibiis tarsisque rufis. Long. ·26.

Southern and Western States, very rare; remarkable for the eyes being nearly as hairy as the rest of the body.

HELICHUS Er.

A. *Elytra vitta suturali nitida, fere glabra.*

1. H. striatus, elongatus, atro-olivaceus, fere opacus, thorace confertim punctato, latitudine vix breviore, antrorsum angustato, lateribus rotundatis, disco ante basin elevato, medio impresso, basi subito depressa, utrinque foveata, elytris striis punctatis sat profundis, interstitiis alternatim paulo elevatis, sutura nitida. Long. ·24. Vermont. C. B. Adams.

2. H. basalis, minus elongatus, obscure olivaceus, subnitidus, thorace punctato, latitudine breviore, antrorsum angustato, lateribus versus basin valde inflexis, disco ante basin transversim elevato, basi depressa, elytris seriatim foveatis, seriebus internis duabus minus distinctis, usque ad striam 3iam nitidis. Long. ·19.

Pennsylvania, Dr. Melsheimer. Troy, (N. Y.) Prof. Adams. This species was given me by Dr. Melsheimer as *Parnus fastigiatus* Say, from which it differs by having the posterior angles of the thorax rectangular; the hairs on the shining part of the elytra are sparse, but not at all fasciculate.

3. H. foveatus, elongatus, atro-olivaceus, fere opacus, thorace confertim punctato, latitudine non breviore, antrorsum rotundato, minus angustato, disco versus basin minus subito depresso, utrinque foveato, elytris striis grosse punctatis interstitiis internis tribus nitidis. Long. ·20.

Sta. Fe (New Mexico.) Fendler.

4. H. suturalis, elongatus, obscure olivaceus, opacus, thorace confertim punctato, latitudine non breviore, antrorsum non angustato, angulis posticis rectis, elytris seriatim punctatis, vitta suturali nitida. Long ·20.

San Diego, California. One specimen.

B. *Elytra æqualiter pubescentia.*

5. H. productus, elongatus, obscure olivaceus, opacus, thorace confertim punctato, latitudine non breviore, antrorsum vix angustato, angulis posticis acutis productis, elytris seriatim punctatis, versus suturam subnitidis. Long. 30.

San Diego.

6. H. lithophilus Er. Ins. Deutschl. 510. *Elmis lithophila* Germ. Ins. Nov. 88. Pennsylvania and New York.

7. H. Gilensis, elongatus, obscure olivaceus, opacus, thorace confertim punctato, antice vix angustato, lateribus ad basin paulo inflexis, angulis posticis rectis, elytris totis opacis, seriatim punctatis. Long. ·17.

One specimen found near the villages of the Pimas, in the valley of the Gila.

8. H. fastigiatus. *Parnus fastigiatus* Say. Long's Exped. 2, 275. Unknown to me: belongs to division A.

Div. 3. *Elmini* Er.

Coxæ anticæ subglobosæ; abdomen 5-articulatum.

LIMNIUS Müll. Er.

1. L. fastiditus, fusco-æneus, oblongo-ovatus, thorace punctato convexo, angulis anticis porrectis, posticis acutis, striola basali utrinque impresso, elytris seriatim punctatis, parce punctulatis, vitta utrinque flava, integra, ad humerum paulo dilatata. Long. ·11. Lec. Agass. Lake Superior, 217.

2. L. elegans, niger, vix æenescens, elongato-ovatus, thorace vix punctulato, angulis anticis minutis, posticis rectis, striola basali utrinque impresso, elytris seriatim punctatis, vix subtilissime punctulatis, vitta a humero ad medium, alteraque a medio ad apicem obliquis flavis ornatis, antennis pedibusque testaceis. Long. ·09.

Massachusetts. Prof. Adams.

ELMIS Latr.

1. E. bivittatus, piceus, elongatus cylindricus, antennis tarsisque flavis, thorace convexo, parce punctato, rufescente, margine antico nigro, lateribus leviter rotundatis, angulis posticis rectis, elytris punctato-striatis, vitta lata integra lutea utrinque ornatis. Long. ·14.

One specimen on the Upper Mississippi; judging from a drawing, this may be *Elmis bivittatus* Dej. Cat.

2. E. quadrinotatus Say, Journ. Ac. Nat. Sc. 5, 187. *Elmis vittatus* Mels. Proc. Ac. Nat. Sc. 2, 99. Common in the Middle States. Dr. Melsheimer's species, as I know by actual inspection, is only an immature specimen of the not unusual variety with the spots confluent forming a vitta. This species is much smaller and less cylindrical than the preceding: the feet are sometimes entirely ferruginous.

STENELMIS Dufour.

1. S. sinuatus, elongatus, piceus, thorace elongato, inæquali, pone apicem magis angustato, angulis anticis porrectis, apice medio producto et rotundato, lateribus late sinuatis, elytris punctato-striatis, interstitio 2ndo basi, 5toque carinatis, macula humerali alteraque subapicali flavis ornatis, tarsis antennisque ferrugineis. Long. ·12.

One specimen Tolula, Georgia: the thorax is elevated in the middle, deeply channelled, and has two tubercles on each side near the margin.

2. S. crenatus, elongatus, ater, thorace elongato, inæquali, ante medium angustato, angulis anticis porrectis, apice medio late rotundato, lateribus late subsinuatis, elytris punctato-striatis, interstitio 2ndo basi 5toque carinatis, antennis ferrugineis. Long. 12.

Elmis crenatus Say, Long's Exped. 2, 275. Pennsylvania, Melsheimer: Niagara: the thorax is less suddenly narrowed in front, and the sides not widened at the apex, but parallel: the sculpture as in the last.

3. S. bicarinatus, elongatus, ater, thorace elongato, vix inæquali, antrorsum angustato, lateribus rectis, elytris profunde punctato-striatis, interstitio 5to carinato, vitta angusta lutea ornatis, antennis tarsisque ferrugineis. Long. ·12. Ohio, Haldeman: the impressions of the thorax as in the preceding, but very faint.

4. S. pusillus, ater, thorace inæquali, impressione oblonga ad medium, carinaque utrinque laterali notato, lateribus subrectis, elytris punctato-striatis, interstitio 2ndo basi, 4to usque ad medium, 5toque carinatis, macula humerali, alteraque subapicali luteis obsoletis, antennis tarsisque furrugineis. Long. ·08. Rapids of Niagara, June, abundant.

MACRONYCHUS Müll.

1. M. glabratus Say, Journ. Ac. Nat. Sc. 5, 187. Pennsylvania, Melsheimer: Vermont, Prof. Adams.

2. M. lateralis Mels. Proc. Ac. Nat. Sc. 2, 99. Unknown to me.

ANCYRONYX Er.

1. A. variegatus Er. Ins. Deutschl. 522. *Macronychus variegatus* Germ. Ins. Nov. 89: Sturm Cat. 2nd, 63, tab. 2, 12: *Elmis cinctus* Say, Journ. Ac. Nat. Sc. 5, 186. Pennsylvania, Vermont, Adams. Germar's name has precedence by one year.

Although not belonging to this family the following may here be added on acacount of its close relation.

GEORYSSUS Latr.

1. G. pusillus, rotundatus, niger, thorace subtiliter canaliculats, ante medium vix transversim impresso, antice rugose punctato, postice lineola

utrinque elevata submarginali notato, elytris fortiter seriatim punctatis. Long. ·07. Platte River, Nebraska Territory: covers itself with a casing of mud like the European species. The thorax is strongly margined, and has at the base near the lateral margin a little interrupted elevated line. In one specimen the the apex of the thorace is emarginate, but I can perceive no other difference.

Synopsis of the Eucnemides *of Temperate North America.*

By John L. Le Conte, M. D.

Although many entomologists consider that the small group of Coleopterous insects, herein treated, constitute a peculiar family, I am under the necessity, after very careful examination, of viewing them as a mere section of the extensive natural family of Elateridæ, and no more entitled to a distinct place in the series, than any other group of genera in that family.

The character which essentially distinguished the Elateridæ from allied families, as Erichson* has pointed out, is the looseness of the articulation between the pro-and meso-thorax. In order to allow of greater liberty of motion, the posterior margin of the inflxed portion of the prothorax is more or less dilated, or concave, so as to slide over the opposing part of the messothorax.

This character, although good in theory, is nevertheless sometimes difficult to be seen, and is less developed in the Eucnemides than in Typical Elaters: yet I have never failed to detect it, on close observation. In the genera Cebrio and Cerophytum it is completely wanting: the former recedes too in the prominent mandibles, and the latter in the posterior femora being inserted at the extremity of the elongate trochanter, instead of at its base and side, as in Elateridæ and most other Coleoptera. Although I have not yet detected the affinities of this difficult genus, I think there can be no doubt of the propriety of entirely excluding it both from the Elateridæ and Cebrionidæ.

The Buprestidæ are distinguished from the Elateridæ by the posterior margin of the prothorax beneath, abutting directly against the mesothoracic segment. More distinct characters will be found in the union of the first and second inferior abdominal segments: the suture between them being visible only at the side: a character of great constancy is found in the form of the eyes, which are strongly transverse in all Buprestidæ, while they are generally round in all Elateridæ. In order to include the Eucnemides with the other more typical groups, the Elateridæ may be thus defined.

Coleoptera pentamera antennis serratis, mandibulis retractis, oculis rotundatis; prothorace inferne mesosternum superante; acetabulis anticis parvis rotundatis, in prosterno sitis, postice valde hientibus: coxis posticis laminatis, trochanteribus simplicibus; abdomine 5-articulato, segmentis omnibus distinctis.

According to the form of the sternum and front, this family may be divided into several groups, of which the first and easiest, the Eucnemides, may be distinguished by the clypeus expanded in front of the antennæ; the labrum concealed: the head strongly deflexed: the prosternum not lobed in front. Our native genera may be arranged as follows:

A. Tarsi non laminiferi.

a. Thorax marginatus, subtus non sulcatus.

1. Palpi tenues, articulo ultimo vix crassiore.

Pedes fortiter compressi, (antennæ minus approximatæ)	Melasis Oliv.
Pedes tenues	Tharops Lap.

2. Palpi articulo ultimo dilatato, (sæpius securiformi).

α. Caput sub oculis non sulcatum.

Laminæ tectrices magnæ intus sensim dilatatæ . .	Euryptychus.
Laminæ tectrices intus subsubito dilatatæ	
tarsi articulo 4to simplici	Epiphanis Esch.
tarsi articulo 4to subtus breviter lobato . .	Emathion Lap.

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* Germar's Zeitschrift für Entomol. 2, 179,

Laminæ tectrices intus quadrangulariter dilatatæ . ANELASTES Kirby.
β. Caput sub oculis valde sulcatum.
Laminæ tectrices angustæ . . . . . HYLOCHARES Latr.
b. Thorax marginatus, subtus ad latera sulcatus.
Antennæ tenues articulo 3io sequentibus longiore . FORNAX Lap.
Antennæ tenues articulo 3io non longiore . . . ISARTHRUS.
Antennæ valde serratæ vel pectinatæ . . . . EUCNEMIS Ahrens.
c. Thorax margine interrupto, vel medio obsoleto.
Sulci antennales ad prosterni marginem siti, . . MICRORHAGUS Esch.
B. Tarsi subtus laminiferi.
Sulci antennales laterales - . . . . . GALBA Esch.

I am not sure that the primary division into genera with and without tarsal appendages is natural, but as I have had no opportunity of examining any genus of the latter division, I do not dare to disturb the arrangement adopted by all previous entomologists. From considerations derived from the study of other Elaters, I am inclined to think that it would be better to divide this portion (B) among those that precede it, putting Galba next to Eucnemis in (b.) and the foreign genus Pterotarsus before Microrhagus in (c.).

MELASIS Oliv.

1. M. pectinicornis Mels. Proc. Ac. Nat. Sc. 2,148. Pennsylvania, Melsheimer; Ohio, Schaum.

THAROPS Lap.

1. T. ruficornis. *Melasis ruficornis* Say, Journ. Acad. Nat. Sc. 3, 166: *Eucnemis* (*Nematodes*) *ruficornis* Say, Trans. Phil. Soc. 6, 187. Missouri; the elytra are yellow, with the posterior half black: sometimes they are entirely yellow. The antennæ of the male are strongly flabellate.

2. T. obliquus. *Eucnemis obliquus* Say, Trans. Am. Phil. Soc. 6,187. Ohio, Dr. Harris. My specimens are two fifths of an inch long, which is double the size mentioned by Say.

EURYPTYCHUS.

Clypeus ad apicem rotundatus: antennæ articulo 1mo elongato, 3io præcedente longiore, 4—8 subæqualibus crassitie paulo longioribus, 9—10 latioribus, et triplo longioribus, 11 iterum longiore, elongato-ovali. Palpi articulo ultimo dilatato, triangulari; prosternum postice promineus, mesosternum profunde excavatum; tibiæ calcaribus apicalibus distinctis; tarsi tenues, articulo 1mo elongato; laminæ tectrices coxarum posticarum intus gradatim valde dilatatæ, apice subacutæ.

The body is regularly arched, moderately wide for this family, and gradually narrowed behind the thorax: the thorax is much narrowed in front and rounded on the sides. The general aspect is precisely that of Ampedus.

1. E. heterocerus. *Eucnemis heterocerus* Say, Trans. Am. Phil. Soc. 6, 186. Pennsylvania, Messrs. Ziegler and Rathvon.

EPIPHANIS Esch.

The insect that I consider as belonging to this genus, differs from the preceding, in having the 3d joint of the antennæ scarcely elongated: the four terminal joints in the male are equally enlarged, and each is about twice as long as the 7th joint; the plates of the posterior coxæ are suddenly dilated within, and are broadly truncate at the extremity. I am unable to see the last joint of the palpi, which Eschscholtz describes as ovoid.

1. E. cristatus, nigro-piceus, griseo-pubescens, capite punctulato, fronte tenuiter cristata, thorace antrorsum angustato subtilius dense punctato, linea media vix distincta lævi, elytris parallelis punctatis, tenuissime striatis, antennis pedibusque rufo-piceis. Long. ·20. New York, one male specimen.

2. E. canaliculatus, nigro-piceus, griseo-pubescens, capite punctato, subtilissime carinato, thorace lateribus parallelis, ante medium rotundatis, con-

fertissime punctato distincte canaliculato, elytris parallelis, rugose punctatis, subtiliter striatis. Long. ·2. One female, Pennsylvania. Differs from the last by its coarser und denser punctuation, and by the thorax not being regularly narrowed in front.

3. E. cornutus Esch. Zool. Atlas. 1,10. tab. 4, fig. 6; Man. Bull. Mosc. 1843, 238. Sitkha: unknown to me.

Emathion Lap.

Sphærocephalus Esch.

This genus has a very great resemblance, to the last, and can only be distinguished by the slight inferior prolongation of the fourth tarsal joint, and by the prosternal prominence being acute. In the last genus this prolongation is blunt and rounded. The males of this genus have the 6 last joints of the antennæ a little enlarged.

1. E. atropos. *Eucnemis atropos* Say. Trans. Am. Phil. Soc. 6, 187. Louisiana, Schaum.

2. E. penetrans, elongatum cuneiforme, atrum confertissime punctatum subtilissime fulvo-pubescens, fronte linea tenuissima lævi, thorace latitudine sesqui longiore, lateribus parallelis antice rotundatis, pone medium late canaliculato, utrinque ante medium obsolete foveato; elytris tenuiter striatis, antennis pedibusque rufo-piceis. Long. ·22—·3.

Georgia: in Say's description of the preceding species, probably by a 'clerical' error, the terminal, instead of the penultimate joint of the tarsi is said to be dilated.

Anelastes Kirby.

1. A. Druryi Kirby. Trans. Lin. Soc. 12, tab. 21, fig. 2: Guérin Ann. Ent. Soc. Fr. 2d ser. 1, 17. *Silenus brunneus* Latr. An. Ent. 3, 129. Georgia.

Guérin refers this genus to the genuine Elateridæ: Erichson in Agassiz' Nomenclator Zoologicus places it in Cebrionidæ. The form of the clypeus, however, forces it into the present group. The prosternum is scarcely prominent behind; the plates of the posterior coxæ are suddenly dilated, by the addition of a quadrangular piece.

2. A. Latreillei, obscure rufo-piceus, subnitidus, thorace convexo, subtiliter parce granulato, postice canaliculato, lateribus valde rotundatis, angulis posticis divergentibus, elytris profunde striatis, interstitiis subtiliter rugose punctatis. Long. ·4—·5. Sacramento, California, Rathvon.

The thorax is much more rounded on the sides than in A. Druryi, and the whole surface is much less scabrous; the head is more distinctly granulated than the thorax, and the frontal line is faint as in the other species.

Hylochares Latr: Guér.

1. H. nigricornis. *Melasis nigricornis* Say Journ. Ac. Nat. Sc. 3, 165. Ohio, Schaum.

Fornax Lap.

Dirhagus Esch

1. F. bicolor. *Hylocharus? bicolor* Mels. Proc. Ac. Nat. Sc. 2, 149. New York: Wilcox.

2. F. badius. *Dirhagus badius* Mels. ibid. 2, 149. Pennsylvania, S. F. Baird.

3. F. cylindricollis. *Eucnemis cylindricollis* Say, Trans. Am. Phil. Soc. 6, 188. Illinois, Georgia, and Pennsylvania.

4. F. striatus, elongatus, ater pubescens, confertim punctatus, thorace latitudine longiore, lateribus leviter rotundatis, pone medium late canaliculato, elytris rugose-punctatis, striis sat profundis, interstitiis modice convexis, antennis tibiis tarsisque rufo-piceis, Long. ·22. One specimen, Georgia. Very similar to the preceding, but smaller, and with deep distinct elytral striæ.

ISARTHRUS.

Antennæ tenues, extus paulo incrassatæ, articulis cylindricis, 2—12 subæqualibus, 11mo paulo longiore. (Palpi invisi.) Thorax subtus ad marginem profunde sulcatus: coxarum posticarum laminæ tectrices intus modice dilatatæ, ad apicem late rotundatæ; tarsi tenues, articulo 1mo elongato, 2—4 gradatim brevioribus, 4to vix dilatato.

This genus differs from Fornax, by the third joint of the antennæ being not larger than the 2d or 4th; and by the posterior coxal plates being less dilated interiorly, and much more broadly rounded at apex: the fourth tarsal joint is less dilated.

1. I. spretus, elongatus utrinque obtusus, ater, breviter cinereo-pubescens, confertim subconfluenter punctatus, thorace convexo, antrorsum angustato, et rotundato, elytris striis tenuibus, interstitiis rugose punctatis, subconvexis, antennis pedibusque rufis. Long. ·2. Lake Superior. This is the *Fornax spretus* of my catalogue in Agassiz' Lake Superior.

EUCNEMIS Ahr.

a. *Antennæ serratæ: tarsi articulo 4to simplici.*

1. E. clypeatus Say, Trans. Am. Phil. Soc. 6, 189: *Elater clypeatus* Say, Ann. Lyc. 1, 266. Pennsylvania, Zimmerman.

b. *Antennæ serratæ: tarsi articulo 4to breviter lobato.*

2. E. amænicornis Say, Trans. Am. Phil. Soc. 6, 189. Southern and Middle States. The antennæ are subflabellate in both sexes: some specimens have the thorax a little rounded on the sides: these are probably females: the whole appearance is so similar to that of genuine Eucnemis, that I have not ventured to establish a separate genus upon the slight difference in the antennæ and tarsi.

MICRORHAGUS Esch.

1. M. imperfectus, elongatus, utrinque obtusus, ater pubescens, punctatus, capite canaliculato, thorace latitudine breviore, lateribus antice rotundatis, elytris tenuiter striatis, pedibus rufo-piceis, sulcis pectoralibus postice indistinctis. Long. ·22. New York, one female.

2. M. subsinuatus, elongatus vix cuneiformis, ater, supra obsolete pubescens, punctatus, thorace brevi, antrorsum subangustato, lateribus subsinuatis, angulis posticis explanatis, elytris rugose punctatis, obsolete striatis, tarsis testaceis. Long. ·2. Georgia, one male; similar to the next, but more than twice as large, and easily distinguished by the sinuosity of the sides of the thorax: it is also more coarsely punctured and less narrowed behind.

3. M. triangularis. *Elater triangularis* Say, Journ. Ac. Nat. Sc. 3, 170: *Eucnemis triangularis* Say, Trans. Am. Phil. Soc. 6, 189. Southern and Western States: the thorax is not at all narrowed in front; the anterior angles are a little rounded. It is singular that Guérin, (Ann. Ent. Soc. Fr. 1, 187,) should refer this species to Eucnemis, when Say expressly states the antennal groove to be near the middle of the pectus.

4. M. humeralis. Eucnemis humeralis, Say, Trans. Am. Phil. Soc. 6, 189. Pennsylvania, Dr. Melsheimer.

GALBA Esch.

1. G. (Dendrocharis) flavicornis Guérin. Ann. Ent. Soc. Fr. 2d ser. 1, 193. tab. 6, fig. 60, 61. Georgia; I have never seen this fine species.

The following species are unknown to me, and the genera to which they belong doubtful.

Eucnemis quadricollis Say, Trans. Am. Phil. Soc. 6, 186. Probably Melasis.

Eucnemis frontosus Say, ibid. Probably not of this group.

Eucnemis calceatus Say, ibid. The description of the antennæ agree perfectly with my Isarthrus spretus; but the 4th joint of the tarsi in that species is not lobed beneath.

Dirhagus rufipes Mels. Pr. Ac. Nat. Sc. 2, 150. The front is said to be longitudinally impressed, which is an unusual character in Fornax.

Eucnemis muscidus and unicolor, Say, Trans. Am. Phil. Soc. 6, 186. (*Elater m. & u.* An. Lyc. 1, 255,) are Perothops mucidus Erichson Germ. Zeitsch. 3, 117. The genus Perothops is of difficult location. It cannot be placed in the present group on account of its prominent, not inflexed mouth. From the typical Elaters it differs by its clypeus dilated in front, and concealing the labrum, and by the absence of an anterior lobe on the prosternum. It seems most natural to consider it as a special group connecting Anelastes among the Eucnemides, with the more typical Elaters.

[Note.—On p. 345 of the last number of this work, (Dec. 1851), the name puncticollis occurs twice in the genus Podabrus. The first of these (at the top of the page), should read Podabrus poricollis.]

The Committee on the Rev. Mr. Langstroth's paper on the "Impregnation of the Eggs of the Queen Bee," reported in favor of publication in the Proceedings.

On the Impregnation of the Eggs of the Queen Bee.

By Rev. Lorenzo L. Langstroth.

Many singular notions have prevailed respecting the generation of bees. Virgil* asserted that bees have no sexual intercourse, but gather young from the leaves of plants. New colonies, he thought, could be obtained from the carcasses of animals. Swammerdam, in his observations on bees, made in 1673, proved, by careful dissection, that the bee commonly called the King, is a female, and the mother of the whole colony, and that the drone is the male bee. He thought that a seminal atmosphere proceeded from the drones and caused the impregnation of the female, or as she is commonly called, the Queen.

Maraldi (1712) conjectured that the eggs of the Queen were fecundated by the drones after being laid in the cells. Arthur Dobbs (Philosophical Transactions, vol. 46 for 1760) was, I believe, the first who suggested that the Queen may have a sperma-theca, from the contents of which the eggs are impregnated. Debraw (Phil. Transac. vol. 67 for 1777) imagined that he saw drones depositing semen in cells containing eggs. Both Huber and Dr. John Hunter have shown that he was mistaken. The latter supports the theory of Dobbs, and endeavors to strengthen it by some curious experiments which he made on the impregnation of the eggs of the silk-worm. (Phil. Transac. vol. 82 for 1792.) Huber† (1788) was the first to demonstrate that the sexual union of the Queen and drone takes place when the insects are on the wing, in the open air; and that a Queen, when impregnated, will continue, at least for several years, to lay fertile eggs without any further intercourse with the male. He thought that she was impregnated for life, but he was not able even to conjecture how all the eggs in her ovary could be at once fecundated. Dzierzon, a German apiarian of great practical knowledge, has revived (1845) the notion of a permanently impregnated sperma-theca. He says that he has dissected Queen bees both before and after impregnation, and that he has found the seminal sac in the first case to contain a limpid fluid like water, and in the second case to be filled with a substance resembling the semen of the drone. This would seem almost to settle the question; but unfortunately he advances a conjecture which seems to be at variance with the idea that he had much skill in dissecting. He thinks that what is the poison sac in the worker becomes the sperma-theca sac in the

* Aristotle informs us that some cultivators called the rulers or kings, mothers, and the drones, males.

† Hattorf and Schirach (1770) believed that the Queen was self-impregnated; and the latter accounted for the existence of males by conjecturing that their semen formed the food of the young bee.

Queen! Now, the poison sac, with the sting and all its appendages, is entirely distinct from the sperma-theca, and can easily be recognized without the aid of the microscope. He does not seem to have examined, microscopically, the fluid in what he calls the seminal vesicle, in order to demonstrate, by the presence of spermatozoa, that it was the semen of the male. As I am not aware that this has been done by any one else, I hereby communicate to the Academy the results of such an examination made last month, by Dr. Joseph Leidy of this city.

The Queen dissected was taken from an observing hive in which she had been lodged in the Summer of 1851, having accompanied a first swarm from a hive which had been swarmed in 1850. I am certain that she was not a Queen of the current year, for she commenced ovi-depositing in the empty cells which the hive contained, the same day in which she was put into it; whereas young Queens, which are not impregnated until after they are established as heads of a new colony, do not begin to lay until after the lapse of several days. I know that she was the same Queen lodged by me in the hive, as the bees were in a hive of my own invention, in which they were exposed to the full light of day, and were under constant inspection. She was therefore nearly two years old. The males in this colony had all been killed in August and there was not one in the hive (Jan. 27th) when she was taken from it.

Plate XIX in Swammerdam's History of Insects, represents very accurately all the parts which were particularly examined. The small globular vessel (fig. 3-t.) which Swammerdam thought secreted a mucous fluid to attend the eggs to the bottom of the cells, was found to be the true sperma-theca. Its internal diameter was the 1-33d of an inch, and it was distended with a whitish, viscous fluid which, when examined by the microscope, was found to be filled with spermatozoa.

I consider, therefore, that this dissection *demonstrates* that the Queen bee has a reservoir in which the semen of the male is lodged, and that the eggs are impregnated as they pass by the duct leading from the sperma-theca into the oviduct.

Note.—Since this paper was written, Dr. Leidy has examined two more Queen bees, each of which had the sperma-theca distended with the spermatic fluid. These Queens were both reared last Summer from eggs in worker combs, which were furnished to colonies deprived of a Queen. The construction of the hives allowed the whole process to be distinctly seen.

Mr. Jacob Peirce exhibited a hybrid fowl, being a cross between the Peacock and Guinea Hen. The specimen was one of four which had been hatched and raised on the farm of Mr. David West, in Chester Co., between Kimberton and the Yellow Springs, Pa.

ELECTIONS.

Dr. Joseph Hopkinson, U. S. Navy, Mr. William Struthers, and Mr. J. Da Costa, of Philadelphia, were elected *Members;* and

Mr. J. W. Foster, U. S. Geologist of the Lake Superior District, and Mr. J. D. Whitney, of the same district, were elected *Correspondents* of the Academy.

ERRATA IN VOL. VI.

Page 2, line 4 from bottom, for *of* read *and*.
" 3, " 13 " top, for *Cretacean* read *Cetacean*.
" 33, " 13 and 20 from bottom, for *Nipongue* read *Mpongue*.
" 36, " 26 from top, for *undeniable* read *undeniably*.
" 40, " 19 " bottom, for *interstialis* read *interstitialis*.
" 45, " 5 " top, for *thorace* read *thorax*.
" 46, " 18 " bottom, for *simplicibus* read *fulcrantibus*.
" 48, in division (*b*) of Eucnemis, for *serratæ* read *pectinatæ*.
" 66, " 10 from top, for *is* read *are*.
" 114, " 2 " bottom, for *fulvis* read *fulvus*.
" 141, " 9 " bottom, for *generus* read *genus*.
" 149, in note (†) for *fr* read *für*.
" 150, the three lines of the diagnosis of Cephennium corporosum have lost the initial letters: to the first add 1, to the second *pl*, to the third *a*.
" 171, line 2 from bottom, for *Africa* read *America*.
" 174, " 22 " top, for *inferior* read *anterior*.
" 180, for *Homolosaurus* read *Homalosaurus*.
" 181, for *Pituophis* read *Pityophis*.
" 229, line 21 from top, for *Anchytursus* read *Anchytarsus*.
" " " 40 " top, for *picea* read *brunneus*.
" 231, after Tostegoptera, for *Edwards* read *Blanchard*.
" 241, line 15 from top, for *Enbradys* read *Eubradys*.
" 302, line 13 from top, for 1859 read 1849.
" 327, " 31 " top, for *læniata* read *tæniata*.
" 329, " 22 " top, for *parvus* read *parvulus*, vide p. 414.
" " " 26 " top, for *Fern* read *Kern*.
" 337, " 31 " top, for *Fauna* read *Faunas*.
" 368, " 12 " top, for *Traünfeld* read *Fraünfeld*.
" " " 29 " top, for *truncates* read *truncatus*.
" 377, top line, for —— read *and*.
" 376, line 17 from bottom, for *Prisidon* read *Prisodon*.
" 403, " 2 " bottom, for *Lyceum* read *State Library*.
" 439, " 17 " bottom, for *Agryppus* read *Agrypnus*.
" 454, " 9 " bottom, for *Endomochydæ* read *Endomychidæ*.
" lxviii, line 22 from bottom, add *Mr. T. A. Conrad*.
" lxxiv, line 17 from top, for *Vorselemque* read *Vorlesungen*.

The following omissions of donations to the Library, August 10th, 1852, occurred at page xxxiii:

Description of a Skeleton of the Mastodon giganteus, of North America. By John C. Warren, M. D. 4to. From the Author.

Exploration and Survey of the Valley of the Great Salt Lake of Utah. By Howard Stansbury, Capt. U. S. Topograph. Eng. 8vo. and map. From Col. J. J. Abert.

Experimental Researches in Electricity, 29th series. By Michael Faraday, Esq. From the Author.

On the Physical Character of the Lines of Magnetic Force. By Michael Faraday, Esq. From the Author.

Zoology of the Great Salt Lake of Utah, (extracted from Capt. Stansbury's Report.) From Prof. S. F. Baird.

Geognostische Wanderungen im Gebiete der nordöstlichen Alpen. Von Carl Ehrlich. From the Author.

Ueber die nordöstlichen Alpen. Von Carl Ehrlich. From the Author.